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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,854	03/23/2004	Stephen M. Birkinshaw	LP4835 USDIV	2488

23906 7590 10/25/2004

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EXAMINER

EINSMANN, MARGARET V

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 10/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/806,854	BIRKINSHAW ET AL.	
	Examiner	Art Unit	
	Margaret Einsmann	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 12 and 13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/24/04</u> . | 6) <input type="checkbox"/> Other: ____. |

Applicant's preliminary amendment has been entered. Claims 1-11 have been canceled; claims 12 and 13 are pending.

Claim Objections

Claims 12 is objected to because of the following informalities: "sodium dithionite" is listed twice as part of the Markush group. See lines three and four. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over BASF, GB 709,150 in view of Kritchevsky et al., US 1,810,663.

BASF, GB 709,150 teach the process of dyeing with an acid vat dye in which process, after reduction and dissolution of the dye, the dye solution is made acidic before contact with the fiber. In example 2 of GB 709,150, a acid vat dye disclosed. Said dye is first vatted or reduced, then acidified for use in the dyeing process. See page 2 lines 41 et seq. The most common chemicals used for vatting or reducing vat dyes are hydrosulfites.

Kritchevsky et al teach a process of forming stable hydrosulfite particles for used in vatting dyes. They teach that sodium hydrosulfite (which is also called sodium dithionite as claimed) is sold in large quantities for reducing vat dyes, that it is quite

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efficient, but it is very unstable due to its capacity of absorbing oxygen and moisture from the air, resulting in the liberation of hydrogen. Accordingly it must be sold in sealed containers and used promptly by the consumer. He teaches that sodium formaldehyde sulfoxylate (as claimed), in which sodium hydrosulphite is combined with formaldehyde, is somewhat more stable but is also not stable in a practical sense. See page 1 lines 4-41. In order to overcome this problem, Kritchevsky discloses that the above mentioned hydrosulphite particles may be enveloped in a water-proof or water-resistant film in order to exclude the oxygen and moisture in the air from the substances. The films may be formed from fatty acids like oleic acid, stearic acid or a sulphonated fatty acid, which read on the at least one carboxylic acid comprising 12-22 carbon atom (or as in claim 13, 16-20 carbon atoms)) as claimed. Both stearic and oleic acids have 18 carbon atoms. See page 1 line 80 to page 2 line 45. Kritchevsky et al teach that said composition should also contain an agent that will serve as an emulsifier to emulsify the oily substance when it is being used in water. Said emulsifiers include ordinary soap or sulphonated soap, both of which are anionic surfactants. See page 2 lines 55 to 75.

It would have been obvious to the skilled artisan to combine the dry product of Kritchevsky as the vatting agent to reduce the dye which is the starting material in example 2 of GB 709,150 because the product produced by Kritchevsky is a stable form of the reducing agents conventionally used to reduce vat dyes. By combining the dye with the product of Kritchevsky and then acidifying as is done in example 2 of Kritchevsky, applicant's claimed product is produced. Kritchevsky's product comprises hydrosulfite in the form of sodium dithionite or sodium formaldehyde sulfoxylate as

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claimed, oleic and/or stearic acid and/or sulfonated fatty acids as the carboxylic acid having 12-22 carbon atoms as claimed, and an anionic surfactant, as claimed, which is added to a vat dye and then acidified.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret Einsmann whose telephone number is 571-272-1314. The examiner can normally be reached on 7:00 AM -4:30 PM M-Th and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

10/19/04


Margaret Einsmann
Primary Examiner
Art Unit 1751